

Title (en)

DEVICE FOR HYPERSPECTRAL HOLOGRAPHIC MICROSCOPY BY SENSOR FUSION

Title (de)

VORRICHTUNG ZUR HYPERSPEKTRALEN HOLOGRAPHISCHEN MIKROSKOPIE DURCH SENSORFUSION

Title (fr)

DISPOSITIF DE MICROSCOPIE HOLOGRAPHIQUE HYPERSPECTRALE PAR FUSION DE CAPTEURS

Publication

**EP 3956712 B1 20230719 (FR)**

Application

**EP 20704294 A 20200211**

Priority

- FR 1901367 A 20190212
- EP 2020053481 W 20200211

Abstract (en)

[origin: WO2020165176A1] The invention concerns a device for the holographic and hyperspectral measurement and analysis (2) of a sample (3), comprising: - an acquisition means (2) for acquiring a diffracted image (11) of an image of the sample (3); and interference patterns (12) of a reference light signal (R) and the light signal (O) having passed through the sample (3) to be measured and analysed; and - a means for illuminating the sample (3) focused on the sample (3); and - a means for reconstructing and analysing (1) the hyperspectral holographic image comprising a deep convolutional neural network generating an image for analysis and detection of particularities in the sample.

IPC 8 full level

**G03H 1/26** (2006.01); **G02B 21/00** (2006.01); **G02B 21/36** (2006.01); **G02B 27/42** (2006.01); **G03H 1/04** (2006.01); **G03H 1/08** (2006.01); **G06N 3/045** (2023.01); **G06N 3/084** (2023.01); **G06T 7/00** (2017.01)

CPC (source: EP US)

**G02B 21/0064** (2013.01 - EP US); **G02B 21/367** (2013.01 - EP US); **G02B 27/4244** (2013.01 - EP); **G03H 1/0005** (2013.01 - US); **G03H 1/0443** (2013.01 - EP US); **G03H 1/0866** (2013.01 - EP US); **G06N 3/04** (2013.01 - US); **G06N 3/045** (2023.01 - EP); **G06N 3/084** (2013.01 - EP); **G06T 7/0012** (2013.01 - EP); **G06V 10/803** (2022.01 - US); **G06V 10/82** (2022.01 - US); **G06V 20/693** (2022.01 - US); **G03H 2001/005** (2013.01 - US); **G03H 2001/266** (2013.01 - EP); **G03H 2222/18** (2013.01 - EP); **G03H 2226/13** (2013.01 - EP); **G06F 18/251** (2023.01 - EP); **G06T 2207/10056** (2013.01 - EP); **G06T 2207/20084** (2013.01 - EP); **G06T 2207/30024** (2013.01 - EP); **G06V 10/141** (2022.01 - EP US)

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)

**FR 3092670 A1 20200814**; **FR 3092670 B1 20210108**; EP 3956712 A1 20220223; EP 3956712 B1 20230719; EP 3956712 C0 20230719; US 2022146981 A1 20220512; WO 2020165176 A1 20200820

DOCDB simple family (application)

**FR 1901367 A 20190212**; EP 2020053481 W 20200211; EP 20704294 A 20200211; US 202017389669 A 20200211